WHAT IS CLAIMED IS:

1. A conjugate vaccine for *Moraxella catarrhalis*, comprising a lipooligosaccharide (LOS) isolated from *M. catarrhalis* and detoxified by treating to remove esterified fatty acids to produce detoxified LOS (dLOS), or by treating to remove lipid A to produce oligosaccharide (OS), and an immunogenic carrier covalently linked thereto.

2. The vaccine of Claim 1, wherein the immunogenic carrier is a protein.

3. The vaccine of Claim 2, wherein the immunogenic carrier protein is selected from the group consisting of UspA isolated from *M. catarrhalis*, CD isolated from *M. catarrhalis*, tetanus toxin/toxoid, a high molecular weight protein (HMP) isolated from nontypeable *Haemophilus influenzae*, diphtheria toxin/toxoid, detoxified *P. aeruginosa* toxin A, cholera toxin/toxoid, pertussis toxin/toxoid, *Clostridium perfringens* exotoxins/toxoid, hepatitis B surface antigen, hepatitis B core antigen, rotavirus VP 7 protein, CRM, CRM_{197}, CRM_{3201} and respiratory syncytial virus F and G protein.

4. The vaccine of Claim 3, wherein the immunogenic carrier protein is tetanus toxoid or HMP.

5. A pharmaceutical composition comprising the vaccine conjugate of Claim 1 in a pharmaceutically acceptable carrier.

6. The pharmaceutical composition of Claim 5, further comprising an adjuvant.

7. The pharmaceutical composition of Claim 6, wherein the adjuvant is an admixture of monophosphoryl lipid A and trehalose dimycolate or alum.

8. A conjugate vaccine according to Claim 1, wherein the immunogenic carrier is covalently linked to dLOS or to OS via a linker compound.

9. The conjugate vaccine of Claim 8, wherein the linker compound is selected from the group consisting of adipic acid dihydrazide, ε-aminohexanoic acid, chlorohexanol dimethyl acetal, D-glucuronolactone and p-nitrophenylethyl amine.

10. The conjugate vaccine of Claim 8, wherein the linker compound is adipic acid dihydrazide.

11. Lipooligosaccharide isolated from *Moraxella catarrhalis* and detoxified by removal of ester-linked fatty acids therefrom.

12. The lipooligosaccharide of Claim 11, wherein *Moraxella catarrhalis* from which the lipooligosaccharide is isolated is a purified strain of *Moraxella catarrhalis.*

13. Lipooligosaccharide isolated from *Moraxella catarrhalis* and detoxified by removal of lipid A therefrom.

14. A method of preventing otitis media caused by infection with *Moraxella catarrhalis* in a mammal, comprising administering to the mammal an effective immunoprotective amount of a conjugate vaccine comprising a detoxified lipooligosaccharide (dLOS) or an oligosaccharide (OS) derived from an isolated lipooligosaccharide obtained from *Moraxella catarrhalis,* and an immunogenic carrier covalently linked to the dLOS.

15. The method of Claim 14, wherein the mammal is a human.

16. The method of Claim 14, wherein the conjugate vaccine is administered parenterally.

17. The method of Claim 16, wherein the conjugate vaccine is administered by intramuscular injection, subcutaneous injection, or by deposit on intranasal mucosal membrane or combinations thereof.

18. The method of Claim 14, wherein the effective immunoprotective amount is between about 10 μg and about 50 μg per dose.

19. The method of Claim 14, further comprising booster injections of between about 10 μg and about 25 μg of the conjugate.

20. The method of Claim 14, wherein the administering step comprises administering a first dose of about 1 to about 50 μg of the conjugate vaccine, and then administering a second dose of about 10 μg to about 25 μg of the conjugate vaccine at about two months after the first dose, administering a third dose of about 10 μg to about 25 μg of the conjugate vaccine at about 2 months after the second dose, and administering a fourth dose of about 10 μg to about 25 μg of the conjugate vaccine at about 12 months after the third dose.

21. A method of detoxifying lipooligosaccharide (LOS) isolated from *Moraxella catarrhalis,* comprising removing ester-linked fatty acids from isolated LOS .

22. The method of Claim 21, wherein the ester-linked fatty acids are removed by treatment of LOS with hydrazine or a mild alkaline reagent.

23. A method of making a conjugate vaccine against *Moraxella catarrhalis* comprising:

removing ester-linked fatty acids from lipooligosaccharide (LOS) isolated from *M. catarrhalis* to produce detoxified LOS (dLOS); and

covalently linking the dLOS to an immunogenic carrier.

24. The method of Claim 23, wherein the removing step comprises treating the LOS with hydrazine or a mild alkaline reagent.

25. The method of Claim 23, wherein the linking step comprises attaching the dLOS to a linker compound and attaching the linker compound to the immunogenic carrier.

26. The method of Claim 25, wherein the linker compound is adipic acid dihydrazide, ε-aminohexanoic acid, chlorohexanol dimethyl acetal, D-glucuronolactone or p-nitrophenylethyl amine.

27. The method of Claim 25, wherein the linker compound is adipic acid dihydrazide.

28. The method of Claim 23, further comprising adding an adjuvant to dLOS linked to an immunogenic carrier.

29. A method of making a conjugate vaccine against *Moraxella catarrhalis* comprising:

removing lipid A from lipooligosaccharide (LOS) isolated from *M. catarrhalis* to produce oligosaccharide (OS); and

covalently linking the OS to an immunogenic carrier.

30. The method of Claim 29, wherein the removing step comprises treating the LOS with an acid reagent.

31. The method of Claim 29, wherein the linking step comprises attaching the OS to a linker compound and attaching the linker compound to the immunogenic carrier.

32. The method of Claim 31, wherein the linker compound is adipic acid dihydrazide, ε-aminohexanoic acid, chlorohexanol dimethyl acetal, D-glucuronolactone or p-nitrophenylethyl amine.

33. The method of Claim 32, wherein the linker compound is adipic acid dihydrazide.

34. The method of Claim 29, further comprising adding an adjuvant to OS linked to an immunogenic carrier.

35. A conjugate vaccine comprising a lipooligosaccharide (LOS) isolated from *M. catarrhalis* and detoxified by treating to remove esterified fatty acids to produce detoxified LOS (dLOS), or by treating to remove lipid A to produce an oligosaccharide (OS), and an immunogenic carrier covalently linked thereto, for use in preventing otitis media caused by infection with *Moraxella catarrhalis* in a mammal.

36. The vaccine of Claim 35, wherein the immunogenic carrier is a protein.

37. The vaccine of Claim 36, wherein the immunogenic carrier protein is selected from the group consisting of UspA isolated from *M. catarrhalis*, CD isolated from *M. catarrhalis*, tetanus toxin/toxoid, a high molecular weight protein (HMP) isolated from nontypeable *Haemophilus influenzae*, diphtheria toxin/toxoid, detoxified *P. aeruginosa* toxin A, cholera toxin/toxoid, pertussis toxin/toxoid, *Clostridium perfringens* exotoxins/toxoid, hepatitis B surface antigen, hepatitis B core antigen, rotavirus VP 7 protein, CRM, CRM_{197}, CRM_{3201} and respiratory syncytial virus F and G protein.

38. The vaccine of Claim 37, wherein the immunogenic carrier protein is tetanus toxoid or HMP.